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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,547	09/26/2005	Toshihiro Ooishi	49677-160	6424
20277 7590 03/03/2009 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096				
EXAMINER				
HOOVER, MATTHEW				
ART UNIT		PAPER NUMBER		
4122				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/511,547

**Applicant(s)**

OOISHI ET AL.

**Examiner**

MATTHEW HOOVER

**Art Unit**

4122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS-300)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 10/18/2004

**DETAILED ACTION**

***Claim Objections***

1. Claims 8-12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 8-12 have not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 7 recites the limitation "minimum movement distance" in line 5. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 8 and 9 recites the limitation "average movement distance" in line 10 and 16). There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobisaka et al (EP 1065175).

Regarding claim 1, Tobisaka discloses a method for manufacturing a glass optical fiber preform by vapor deposition (abstract). The method includes using a plurality of burner units (figure 1 #62, 64, 66, 68 and 70) arranged opposite a preform rod (figure 1 #38) (abstract). Figure 3 shows the movement of the burners over time. The burners move in the positive x-direction to a turn back location (point where direction switches from positive x-direction to negative x-direction). Once the turn back location reaches a specific point, which is a certain distance from the initial turn back location, the burner the turn back in the negative x-direction and the turn back position is moved in the negative direction. This movement continues until each burner returns to its original position. This can be considered one set of operation. Figure 3 can also be used to find the average reciprocating movement. Using the graph (3A), the total movement distance in one set is approximately 660mm (maximum distance in x-direction is 330 and travels there and back) while the number of reciprocations in a set

is 11 (number of times direction changes). Therefore the average reciprocating distance is  $(660/11)$  which is 60mm. the burner to burner distance is 150mm (D1 figure 3A) so the average reciprocating distance is less than  $2 \times D1$ . Regarding claim 2, figure 3A shows that the movement distance of the turn back location is almost equal each time. This means that the distance the turn back location moves forward or backward in the x-direction is the same after each reciprocation. Regarding claim 6, the movement range of the turn back position is approximately 310mm (figure 3A). The burner interval is also estimated to be 150mm from figure 3A. The movement range (310mm) is about the same as an integer (2) times the burner interval (150). Regarding claim 7, it can be read off of figure 3A that the turn-back location has a movement range of about 310mm. it can also be read that the minimum movement distance of the turn back location is 50mm (distance between turn back locations in subsequent reciprocations). Using these values, the movement range of the turn back location is about n times (n being an integer) the burner interval (150mm) minus the minimum movement distance of the turn back location. (310mm is about 250mm).

Tobisaka does not disclose that the depositing of glass particles can be repeated for multiple layers.

It would have been obvious to one of ordinary skill in the art at the time of the invention to repeat the process of depositing glass particles on a rod, since it has been held that claimed continuous operations would have been obvious in light of the batch process of the prior art.. See MPEP 2144.04(V)(E) and *In re Dilnot*, 319 F.2d 188, 138 USPQ 248 (CCPA 1963).

Regarding claims 3-5, Tobisaka does not disclose the different iterations of burner movement.

Regarding claims 3-5, figure 3A discloses the burner movement of a certain embodiment. It would have been obvious to one of ordinary skill in the art to change the sequence of these movements in order to create a different embodiment since it has been held that selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results. See MPEP 2144.04(IV)(C) and *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946).

Regarding claims 6 and 7, reading from the graph, the values in the relationships in the disclosed claims are not exactly equal to each other.

Regarding claims 6 and 7, it would have been obvious to one of ordinary skill in the art at the time of the invention to approximate the values off of the graph (figure 3A) to determine the relationship between the movement range of the turn back location and the burner interval since it has been held that when the difference between a claimed invention and the prior art is the range or value of a particular variable, then a *prima facie* rejection is properly established when the difference in the range or value is minor. See MPEP 2131.02(I) and *Titanium Metals Corp of Am v Banner*, 778 F2d 775, 783, 227 USPQ 773, 779 (Fed Cir 1985).

Generally, differences in ranges will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such ranges is critical. See MPEP 2144.05(II)(A), *In re Boesch*, 617 F2d 272, 205 USPQ 215 (CCPA

1980); *In re Aller*, 220 F2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and *In re Hoeschele*, 406 F2d 1403, 160 USPQ 809 (CCPA 1969).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rau et al (US 4045198, method of preparing a foreproduct for an optical lightconductor), Kase et al (US 20020050154, method of manufacturing glass base material), Shimada et al (US 5958102, apparatus and method for making an optical fiber) and Schaper et al (US 6047564, method of producing quartz glass bodies).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW HOOVER whose telephone number is (571)270-7663. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MH/  
Examiner AU 4122

/Timothy J. Kugel/  
Primary Examiner, Art Unit 1796